

LEPSKIY, A.V.; BORODULINA, Ye.V.; UGODIN, Ye.G.; PLYUKHIN, D.S.; MOROZOV, E.N.;  
DRUGAL', S.A.; Kharitonov, Ye.V.; RAMODIN, V.N.; CHUPRIKOV, S.A.

[Over-all mechanization and automation of the unloading of bulk  
freight.] Kompleksnaia mekhanizatsiia i avtomatizatsiia vygruzki  
sypuchikh gruzov. Moskva, Transport, 1964. 182p. (Trudy  
Vsesoiuznogo nauchno-issledovatel'skogo instituta zheleznodo-  
rozhnogo transporta, no.285).

(MIRA 17:12)

STOGOV, V.N., doktor tekhn.nauk prof.; PLYUHHIN D.S., kand. tekhn.  
nauk; YEFIMOV, G.P., kand. tekhn.nauk; GRINEVICH, G.P.,  
doktor tekhn. nauk, retsenzent; SHISHKIN, G.S., inzh., red.;  
USENKO, L.A., tekhn. red.

[Loading and unloading machinery] Pogruzochno-razgruzochnye  
mashiny. Moskva, Transzheldorizdat, 1963. 239 p.  
(MIRA 16:8)  
(Loading and unloading--Equipment and supplies)

PLYUKHIN, N.A.

[Practices of the "Put' k kommunizmu" Collective Farm in Glinks District for increasing output of agricultural products and raising income; an aid for readers] Opyt kolkhoza "Put' k kommunizmu" Glinkovskogo raiona po uvelicheniiu proizvodstva sel'skokhoziistvennykh produktov i povysheniiu denezhnykh dokhodov; material v pomoshch' lektoru. Smolensk, Ob-vo po rasprostraneniiu polit. i nauchn. znanii RSFSR, Smolenskoe obl. otd-nie, 1957. 11 p. (MIRA 10:11)

1. Chlen obshchestva po rasprostraneniyu politicheskikh i nauchnykh znanii RSFSR  
(Collective farms)

KOPYSOV, A.A.; PLYUKHIN, V.I.; KRYUKOV, V.L., red.; ZUBRILINA, Z.P.,  
tekhn. red.

[Catalog of spare parts for stationary engines] Katalog zapas-  
nykh chastei k statsionarnym dvigateliam. Moskva, Gos.izd-vo  
sel'khoz.lit-ry, 1959. 373 p. (MIRA 14:12)  
(Diesel engines—Catalogs) (Hydraulic turbines—Catalogs)

PLYUKHIN, V.V.; BELOV, N.V.

Crystalline structure of rubidium di(meta)fluoberyllate  
RbBe<sub>2</sub>F<sub>5</sub> and its model relations to laminated silicates  
with [Si<sub>2</sub>O<sub>5</sub>] radical. Kristallografiia 6 no.6:847-858 N-D  
'61. (MIRA 14:12)

1. Institut kristallografiia AN SSSR.  
(Rubidium beryllium fluoride)  
(Silicon oxides)  
(Crystallography)

L 21694-66 EWT(m)/T/EWP(t) IJP(c) JD/JG

ACC NR: AP6015827

SOURCE CODE: UR/0020/65/163/001/0094/0096

40

AUTHOR: Guseynov, G. G.; Plyukhin, V. V.; Belov, N. V. (Academician)

39

ORG: Institute of Crystallography, AN SSSR (Institut kristallografii AN SSSR)

B

TITLE: Crystal structure of Na-orthofluoroberyllate gamma-Na<sub>2</sub>BeF<sub>4</sub>

SOURCE: AN SSSR. Doklady, v. 163, no. 1, 1965, 94-96

TOPIC TAGS: crystal structure, beryllium compound

ABSTRACT: The institute has recently determined the structure of K<sub>2</sub>BeF<sub>4</sub> and Rb<sub>2</sub>BeF<sub>4</sub>, and has shown that both can serve as structural models for the orthosilicate Ba<sub>2</sub>SiO<sub>4</sub> (the K compound highly similar, the Rb compound somewhat distorted). The olivine-like motif is well expresses in these compounds, but with important differences - distortions being related to the size of the K, Rb, and Ba cations as compared with Mg. There are three modifications of Ca<sub>2</sub>SiO<sub>4</sub>: larnite ( $\gamma$ -Ca<sub>2</sub>SiO<sub>4</sub>), in particular, duplicates the olivine structure exactly.

According to a table given of ion radii of "parallel" atoms,  $\delta$ -Na<sub>2</sub>BeF<sub>4</sub> should be a perfect structural model of Ca-orthosilicate. Of the three modifications ( $\delta$ ,  $\gamma$ ,  $\chi$ ) of Na<sub>2</sub>BeF<sub>2</sub>, the  $\gamma$ -phase was the most promising model to relate to larnite.

Card 1/2

L-21694-65

ACC NR: AP6015827

Comparisons are made between  $\gamma\text{-Ca}_2\text{SiO}_4$  and  $\gamma\text{-Na}_2\text{BeF}_4$  structures with the aid of Patterson diagrams. The structural parameters of  $\gamma\text{-Na}_2\text{BeF}_4$  are described in detail. Orig. art. has: 3 figures and 2 tables. [JPRS] 1

SUB CODE: 20 / SUBM DATE: 03Apr65 / ORIG REF: 009 / OTH REF: 003

Beryllium Compound

27

Card 2/2 FW

KRUZE, E.E.; BAKLANOVA, I.A.; KITANINA, T.M.; PLYUKHINA, M.A.;  
TITOVA, A.N.; VYATKIN, M.P., otv. red.; GOL'DBERG, N.M.,  
red.izd-va; KRUGLIKOV, N.A., tekhn. red.

[Monopolies in the metal industries of Russia from 1900 to  
1917; documents and materials] Monopolii v metallurgicheskoi  
promyshlennosti Rossii, 1900-1917; dokumenty i materialy.  
Moskva, Izd-vo Akad. nauk SSSR, 1963. 653 p. (MIRA 16:7)

1. Akademiya nauk SSSR. Institut istorii. Leningradskoye  
otdeleniye.

(Iron industry) (Steel industry) (Copper industry)

PLYUKSNE, N. I.

USSR/Engineering—Tempering

Card 1/1 : Pub. 128—17/33

Authors : Plyuksne, N. I., Cand. Tech. Sci.

Title : Effect of tempering with high-frequency current on the strength of splined connections during torsion

Periodical : Vest. mash. 34/8, 59-61, Aug 1954

Abstract : A description is given of experiments conducted with the tempering of steel, used in splined connections, by using high-frequency electric current. Data were compiled of all phases of the experimentation and an analysis of them shows an increase in strength of up to 80%, during torsional strain. Graphs; illustrations; tables.

PLYUKSNE N.I.

MS Methods for Determining the Strength of Wire Cables.  
K. V. Kovalev and N. I. Plyukino. (Zavodskaya Laboratoriya,  
1955, 21, (1) 84-88). [In Russian]. Methods for testing  
cables under tension, bonding and torsion are described.  
Examples of results for various types of cable are given. K. V.

(1)

PLYUMMO, A.A.

"Oscillographic Determination of the Energy of an Electric Explosion of a Wire," by I. F. Kvartskhava, V. V. Bondarenko, A. A. Plyummo, and A. A. Chernov, Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 31, No 5 (11), Nov 56, pp 745-751

The electric explosion of wires was studied by an oscillographic technique "which is free of errors caused by inductive distortion of the explosion oscillograms."

It was established that, for relatively low voltages on the condenser, the electric explosions do not cause any anomalies in the relation between introduced energy and wire resistance during the time from the start of the discharge to the first current maximum. "On the other hand, for high voltages on the condenser, wire resistance during this time is not uniquely determined by the energy introduced. This indicates a loss of energy from the wire during the explosion."

It was further concluded that the contracting effect of the current's magnetic field limits the degree of current density attainable, particularly in the case of thin wires. Values obtained for current density rose with an increase in the diameter of the wire.

54A.1305

PLYUKHIN, V.V.; BELOV, N.V.

Determination of the structure of lovoserite from the cross sections  
of the three-dimensional Paterson function. Kristallografiia 5 no.2:  
200-214 Mr-Ap '60. (MIRA 13:9)

1. Institut kristallografi AN SSSR.  
(Lovoserite)

PLYUSHCH, A., starshiy nauchnyy sotrudnik; ALIFOV, S.; DZHABRAILOV, G.

Using water-oil emulsions in hydraulic fracturing of stata.  
Neftianik 7 no.3:12 Mr '62. (MIRA 15:5)

1. Institut razrabotki neftyanykh i gazovykh mestorozhdeniy AN  
Azerbaydzhanskoy SSR (for Plyushch). 2. Nachal'nik laboratorii  
TSekha nauchno-issledovatel'skikh proizvodstvennykh rabot neftepro-  
myslovogo upravleniya Siazanneft' (for Alifov). 3. Nachal'nik  
TSekha nauchno-issledovatel'skikh proizvodstvennykh rabot neftepro-  
myslovogo upravleniya Siazanneft' (for Dzhabrailov).  
(Siazan' region--Oil wells--Hydraulic fracturing)

PLYUSHCH, A.M.; VAKULIN, A.N.

Experience in the use of solvents to increase petroleum  
recovery. Nefteprom. delo no.4:36-39 '63. (MIRA 17:8)

PLYUSHCH, A.M.

Flow distribution and head losses in casting-string filters.  
Nefteprom. delo no.10;14-16 '63. (MIRA 17:6)

1. Institut razrabotki neftyanykh i gazovykh mestorozhdeniy  
AN AzSSR.

ZAYTSEV, Yu.V.; PLYUSHCH, A.M.

Stress relief in hydraulic fracturing. Nefteprom. delo no.7:  
23-26 '64. (MIRA 17:8)

1. Gosudarstvennoye ob'yedineniye Azerbaydzhanskoy neftyanoy  
promyshlennosti i Institut razrabotki nefti AN AzerSSR.

PLYUSHCH, A.M.

New design for hydraulic fishing tool. Mash. i neft. obor.  
no.5:34-35 '63. (MIRA 17:8)

1. Institut razrabotki neftyanykh i gazovykh mestorozhdeniy  
AN AzSSR.

PLIESUCH, A.M.

Recent developments in drilling. Neft. i gaz. prom. no. 1; 75-76  
O-D '63.

17:1K;

1. Institut razrabotki neftyanykh i gazovykh mestorozhjenij AN AzSSR.

PLYUSHCH, A.M.

Automation of petroleum production abroad. Mash. i neft'.  
obor. no.1:42-43 '63. (MIRA 17:1)

1. Institut razrabotki neftyanykh i gazovykh mestorozhdeniy  
AN AzSSR.

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001341330003-3

HIVENICK, R. L.

Using aluminum drilling pipe, 100 ft. 1/2 in. diam. 100 ft.  
April '63. (SAC-120)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001341330003-3"

PLYUSHCH, A.M.; ZULALOV, Yu.I.; MDIVANI, A.G.

Effect of the drilling depth on expenditures on spare parts.  
Mash. i neft. obor. no. 8:20-21 '64. (MIRA 17:11)

1. Institut razrabotki neftyanykh i gazovykh mestorozhdeniy AN Az-  
SSR, ob"yedineniye "Azneft'" i Neftepromyslovoye upravleniye im.  
XXII s"yezda Kommunisticheskoy partii Sovetskogo Soyuza.

PLYUSHCH, A.M.

Economic efficiency of petroleum-production automation abroad.  
Mash. i neft. obor. no.38-39'63 (MIRA 17'7)

1. Institut razrabotki neftyanykh i gazovykh mestorozhdenij  
AN A~~S~~SR.

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001341330003-3

PLYUSHCH, A.M.

Use of synthetic materials in petroleum production. Nefteprom.  
delo no.8:40-41 '63. (MIRA 17:4)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001341330003-3"

PLYUSHCH, A.M.

New design for retractable drill. Mash. i neft. obor. no.7:34 '63.

(MIRA 17:1)

1. Institut razrabotki neftyanykh i gazovykh mestorozhdeniy AN AzSSR.

ACC NR: AP7013709

SOURCE CODE: UR/0020/67/172/002/0338/0340

AUTHOR: Plyushch, A. M.

ORG: Institute of Problems of Deep Petroleum and Gas Deposits, AN AzerbSSR  
(Institut problem glubinnykh neftegazovykh mestorozhdeniy AN AzerbSSR)

TITLE: Prediction of temperature in deep layers

SOURCE: AN SSSR. Doklady, v. 172, no. 2, 1967, 338-340

TOPIC TAGS: earth crust, earth thermodynamics, stratigraphy

SUB CODE: 08

## ABSTRACT:

For an approximate estimate of temperature at a depth of 15 km in the Saatly region in the southeastern Caucasus, where the drilling of a superdeep borehole is planned, the author used the following expression for the geothermal gradient:

$$G = \left[ Q - H_0 x - \sum_{i=1}^n (H_{i-1} - H_i) l_{i-1} \right] / \lambda,$$

Card 1/2

UDC: 550.836(479.24)

0933 2171

ACC NR: AP7013709

where  $H_n$  is the generation of heat in the layer of the earth's crust  $\lambda_i$  is the distance from the surface to the bottom of the layer,  $Q$  is the heat flux near the surface,  $n$  is the number of layers  $\lambda$  is the heat conductivity of the rocks in them, and  $x$  is depth. The value  $Q$  for this region is not known, so  $Q$  for an adjacent area was employed. A table was compiled showing the percentage of different rocks in each interval of depths, as well as  $H_n$ ,  $\lambda$  and  $G$ . The methods used in obtaining each of these values for different depths and different rock strata are described. A considerable number of assumptions and deductions had to be made in deriving these values. The mean weighted values  $\lambda$  were computed for each of the depth intervals. Then  $G$  was determined for each depth interval, temperatures were computed and a graph of the change of temperature with depth was constructed. The calculations revealed that the temperature at the bottom of this 15-km borehole will be about  $265^{\circ}$ . This article was presented by Academician A. L. Yanshin on 26 March 1966. The author thanks B. G. Polyak and Ya. B. Smirnov for valuable observations during the review of the manuscript. Orig. art. has: 3 figures, 1 formula and 1 table.

[JPRS: 40,106]

Cord 2/2

PLYUSHCH, A.M.

Pressure gradients in repetitive hydraulic fracturing of strata.  
Nefteprom. delo no. 6:11-12 '63. (MIRA 16:10)

1. Institut razrabotki neftyanykh i gazovykh mestorozhdeniy  
AN AzSSR.  
(Azerbaijan—Oil wells—Hydraulic fracturing)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001341330003-3

1. Institut razrabotki neftyanykh i gazovykh mestorozhdeniy  
AN AzSSR.  
(Azerbaijan—Oil wells—Hydraulic fracturing)

PLYUSHCH, A.M.

Pressure gradient in hydraulic fracturing of strata in the  
areas of the Caspian Sea monocline. Izv.AN Azerb.SSR.Ser.  
geol.-geog.nauk i nefti no.4:113-120 '62. (MIRA 16:2)  
(Caspian Sea region--Oil wells—Hydraulic fracturing)

PLYUSHCH, A.M.; ASADOV, A.I.; YELIYEV, A.A.

Some results of second shaft drilling in fields of the Oil Field  
Administration of the Artem Petroleum Trust. Azerb. neft. khoz.  
41 no.11:30-31 N '62. (MIRA 16:2)  
(Artem Island—Oil fields—Production methods)

AVETISOV, A.A.; PLYUSHCH, A.M.

Effectiveness of hydraulic fracturing in fields of the Oil Field  
~~APPROVED FOR RELEASE 08/23/2000 CIA-RDP86-00513R001341330003-3~~  
40 no.4:29-31 Ap '61. (MIRA 15:7)  
(Siazan' region—Oil wells—Hydraulic fracturing)

PLYUSHCH, A.M.:

PLYUSHCH, A.M.: "The effectiveness of extracting oil from a water layer as a function of the structure of the porous space". Baku, 1955. Published by the Acad Sci Azerbaydzhan SSR. Petroleum Dispatching Office. (Dissertations for the Degree of Candidate of Technical Sciences)

THE RESTRICTIVE DOCUMENT IS NOT INDEXED IN THIS LIBRARY.

PLYUSHCH, B. M.

PA-2T25

X USSR/Electric Machinery Mar 1947  
Oil Drilling Machinery - Voltages

"Voltages in Oil Drilling," B M Plyushch and  
M A Esibyan, 2 pp

"Energeticheskiy Byulleten" No 3

Correct voltages for oil-drilling equipment

2T25

TA 1/LV/TU

PLYUSHCH, B. M.

May 48

USSR/Petroleum

Drills, Oil Well  
Drives, Electric

"The Electric Drive of Deep Drilling Derricks,"  
B. M. Plyushch, Azerbaydzhan Industrial Inst imeni  
Azizbekov, 3 pp

"Energet Byul" No 5

Discusses subject generally and concludes that  
for drilling installations of 4,000 meters and  
above, hydraulic braking should be superceded by  
electric, using either AC or DC. Editor requests  
readers' views on this article, especially from  
economy standpoint.

1/49T01

PLYUSHCH, B. M.

TA 2/5075  
USER/Engineering - Motors, Electric      AUG 48  
Pumps

"Self-Starting Electric Motors for Deep-Well  
Pumping Equipment," B. M. Plyushch, M. A. Esibyan,  
M. D. El'birt, V. I. Barkisov, 52 pp

"Energet Byul" No 8

User well motors are not now fitted with self-starting arrangements. Hence, if they stop due to momentary interruption in power supply, they must be started again by hand. Describes own self-starting scheme in detail. Peak currents during self-starting do not greatly exceed normal

2/5075

TA 2/5075  
USER/Engineering - Motors, Electric      AUG 48  
Pumps (Contd)

substitution power requirements. Includes three tables and four diagrams.

2/5075

PIYUSHCH, B. M.

PA 43/49T90

USSR/Petroleum - Well Drilling      Oct 48  
Drilling Machinery

"Loss of Power of a Rotary Rig in Rotary Drilling,"  
B. M. Flyushch, 5 pp

"eft Khoz" No 10

Loss of power during rotation of rig depends on curvature of well. Introduces additional formulas which permit determination of power used for rig's rotation. In sinking vertical wells, power of rig decreases considerably on account of rig's rotation. Power of established drilling plant, which can be used to force the drilling process, is economized in the same way. Gives two tables, one diagram, and formulas of experimental results.

43/49T90

PA 33/49 T97

PLYUSHCH, B. M.

USSR/Petroleum Industry  
Pumps

Jan 49

"Voltage Networks for Supplying the Electric  
Motors on Oil-Well Pumps," B. M. Plyushch, M. A.  
Esibyan, Azerbaijan Ind Inst imeni Azizbekov,  
4 pp

"Energet Byul" No 1

Present-day circuits using 380 volts require high  
nonferrous metal expenditure, and operate uneco-  
nomically. Recent practice in industry has been  
to use 660-volt circuits. Recommends that same  
voltage be used at various petroleum industries.

33/49T97

USSR/Petroleum Industry (Contd) Jan 49

Compares relative merits of 380, 500 and 660  
volts. Concludes that conversion to 660 volts  
would be much easier than conversion to 500 volts.

33/49T97

PA 196T47

PLYUSHCH, B. M., Docent

USSR/Electricity - Motors  
Starting, Automatic

Sep 51

"Self-Starting of Electric Motors Supplied From  
a Feeder," Docent B. M. Plyushch, Cand Tech Sci,  
Docent M. A. Esibyan, Cand Tech Sci, V. O.  
Sarkisyan, Cand Tech Sci, Azerbaijan Industrial  
Inst imeni Azizbekov; M. D. El'birt, Engr,  
"Lennneft," Trust

"Elektrichesvo" No 9, pp 44-49

Electric motors for pumping equipment in oil  
fields are fed from 320-kva transformers. Each  
transformer supplies 3 - 4 feeders, each of which  
196T47

USSR/Electricity - Motors (Contd) Sep 51

may have up to 20 motors connected to it.  
Describes self-starting system developed by  
the authors and gives results of expts at opera-  
tional deep-pumping installations. Submitted  
5 Jan 51.

196T47

PLYUSHCH, B.M.

Inert, meltable, spiral inserts for fuses. Energ.biul. no.7:11-13 J1 '53.  
(MLRA 5:7)  
(Electric fuses)

PLYUSHCH, B.M.

Experience in boring petroleum wells by using a direct current electric drive. Energ.biul. no.5:5-12 My '54. (MLRA 7:5)  
(Petroleum--Well boring) (Electric driving)

Subject : USSR/Electricity AID P - 1313  
Card 1/1 Pub. 28 - 2/7  
Authors : Plyushch, B. M., and Sarkisyan, V. O.  
Title : Experience in self-starting operation of electric motors  
for walking beam deep well-pumping installations  
Periodical : Energ. byul., #12, 6-13, D 1954  
Abstract : A general circuit connected to a trunk line through  
automatic switches, power relay, fuse, etc., is presented  
for illustration of the operation of self-starting in  
electric motors. Various protective regulations are  
specified, particularly concerning the safe operation of  
deep-well pumping installations.  
Institution : None  
Submitted : No date

PLYUSHCH, B.M., kandidat tekhnicheskikh nauk; ESIBYAN, M.A., kandidat  
tekhnicheskikh nauk; SARKISYAN, V.O., kandidat tekhnicheskikh nauk.

Synchronous electric drive of the principal transmissions of  
flour mills. Elek.sta. 25 no.7:43-45 Jl '54. (MLRA 7:8)  
(Electric driving) (Milling machinery)

WYOMING, B.M.

AID P - 3434

**Subject** : USSR/Electricity

Card 1/2      Pub. 27 - 1/32

Authors : Plyushch, B. M., and V. O. Sarkisyan, Kands. of Tech.  
Sci., Dotsents

**Title** : Electric drive of the walking beam of oil deep-pumping installations

Periodical : Elektrichestvo, 10, 1-6, 01955

**Abstract** : On the basis of relations obtained for four-link mechanisms, the author presents an analytical expression for the static moment and the moment of losses of the pumping machine. The equation of the movement of the electric drive with a variable moment of inertia of the system is solved accounting for losses. For practical calculations simple and sufficiently accurate formulas are suggested for the determination of the capacity of the electric motor and for the maximum static moment. One drawing and 1 diagram.

AID P - 3434

Elektrichestvo, 10, 1-6, 0 1955

Card 2/2 Pub. 27 - 1/32

Institution : Azerbaydzhan Industrial Institute im. Azibekov

Submitted : Ap 4, 1955

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001341330003-3

ESIBYAN, N.A.; PLYUSHCH, B.M.

Synchronous electric drive for mud pumps. Energ.biol. no.10:1-9  
O '56. (MLB 9:11)

(Electric motors, Synchronous)  
(Oil well drilling--Equipment and supplies)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001341330003-3"

AUTHOR: Plyushch, B.M.; Esibyan, M.A. SOV-90-58-9-2/8

TITLE: On a Voltage of 660 v for Oil Fields (O napryazhenii 660 v dlya neftyanykh promyslov)

PERIODICAL: Energeticheskiy byulleten', 1958, Nr 9, pp 4-7 (USSR)

ABSTRACT: The author discusses the advantages of using a 660 v voltage in industrial enterprises and especially in oil fields. By a comparison with 380, 500, 660 and 1,000 v voltages, he shows that 660 v is more economical to install and run; it decreases voltage losses and makes possible a saving in non-ferrous metal needed for the wiring. He advocates the gradual change over from 380 v to 660 v in oil enterprises. There are 2 tables, 2 graphs and 1 Soviet reference.

1. Petroleum industry--USSR
2. Electricity--Measurement
3. Voltage--Measurement

Card 1/1

SOV/143-58-9-6/18

AUTHOR: Plyushch, B.M., Candidate of Technical Sciences,  
Docent; Aliyev, I.A., Engineer

TITLE: Compounding Synchronous Electric Drives (Kompaundirov-  
aniye sinkhronnykh elektroprivodov)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Energetika,  
1958, Nr 9, pp 45-49 (USSR)

ABSTRACT: National norms require that all synchronous motors  
must be fitted with devices for boosting excitation  
which must work at grid voltage drops of from 15%.  
This excitation boosting should increase the functional  
stability of the power system and the motor itself when  
working at large grid voltage drops. This is achieved  
by using a closing relay automatic adjuster, that shorts  
all resistances in series with the excitation booster  
when the moment the voltage decreases. Defects of  
this method can be eliminated by compounding the syn-  
chronous motors. Compounding, in contrast to relay  
excitation boosting can also work when there is a load

Card 1/3

SOV/143-9-6/18

### Compounding Synchronous Electric Drives

variation, so that functional stability increases when there is an increase of the load on the main shaft. Compounding can be achieved in various ways. The simple method is to feed the excitation winding of the normal exciter from the exciter itself as well as via current transformers connected in the stator circuit of the motor. This method was tested experimentally on synchronous motors: 1) 30 KVA, 230V, 1000 rpm and 75.5 A. Excitation 20 A, 26 V; 2) 300 KVA, 6000 V, 750 rpm, 29 A. Excitation 105 A, 42 V type SM 300-750. The second variant of compounding is that where a dynamoelectric amplifier is utilized instead of the normal exciter. Its use assures highspeed running of compounding, raises the exciter current coilng and reduces the load on the current transformers. One shortcoming seems to be the need to have a constant dc power supply to feed the intensifier. Investigations show that compounding of synchronous electric drives can be achieved by using simple circuits. Those circuits discussed in this paper automatically increase the excitation current of

Card 2/3

L 04080-67	EWT(1)
ACC NR:	AP6025419 (A/N) SOURCE CODE: UR/0143/66/000/007/0048/0053
AUTHOR:	Plyushch, B. M. (Doctor of technical sciences, Professor); Abdulrakhmanov, K. A. (Candidate of technical sciences) 40 B
ORG:	Azerbaidzhan Red Labor Flag Institute for Petroleum and Chemistry im. M. Azizbekov (Azerbaydzhanskiy institut nefti i khimii)
TITLE:	Some questions on the operation of a three phase asynchronous motor with an unsymmetric and nonsinusoidal character of the voltages 29
SOURCE:	IVUZ. Energetika, no. 7, 1966, 48-53
TOPIC TAGS:	electric motor, electric theory
ABSTRACT: The article proposes a method for determining the efficiency of a motor as a function of its parameters, for the simultaneous action of nonsymmetry and higher harmonics, as well as with their separate action. The article sets up equations connecting the efficiency of the motor with feeding from a circuit with symmetric sinusoidal and with unsymmetric nonsinusoidal voltages, at the same value of the power on the shaft. The appropriate mathematical calculations are carried through for both cases. It is concluded that values of the nonsymmetry	
Card 1/2	UDC: 621.313.333.016

L 04080-67

ACC NR: AP6025419

and the higher harmonics of the voltages met with in practice can bring about a marked decrease in the efficiency of an asynchronous motor. The article contains a formula for evaluation of the lowering of efficiency due to these causes. The effect of the above factors on the moment of rotation of an asynchronous motor can be neglected. Orig. art. has: 12 formulas and 4 figures.

SUB CODE: 09/ SUBM DATE: 14Nov64/ ORIG REF: 007

kh

Card 2/2

L 39575-66 EWT(1)/EWT(m)/T DJ/GD

ACC NR: AP6000432

SOURCE CODE: UR/0292/65/000/010/0014/0016

AUTHOR: Plyushch, B. M. (Doctor of technical sciences; Professor);  
Ryskin, L. L. (Engineer)

ORG: none

TITLE: Operation of a sliding contact in d-c motors submerged in a liquid dielectric

SOURCE: Elektrotehnika, no. 10, 1965, 14-16

TOPIC TAGS: dc motor, submersible dc motor

ABSTRACT: An experimental investigation of the operation of d-c motor brushes submerged in transformer oil is reported. A PN-68, 220-v, 33-amp, 6.2-kw, 1460-rpm d-c motor with a 125-mm diameter commutator was equipped with a device for adjusting the pressure exerted on 10 x 25 x 32-mm brushes; the entire motor was submerged into transformer oil whose temperature could be controlled. Hard carbon (T-2) brushes exhibited the best sparkless performance at speeds up to 2200 rpm and loads up to 1.25 nominal. An auxiliary textolite "guard" brush with its separate spring was found to be of some merit, particularly at lower speeds and temperatures. A pressure of 5-6 kg/cm<sup>2</sup> is recommended for speeds of 10-12 m/sec and oil temperatures of 40-50C. Three other d-c motors (6.2, 6.2, and 0.8 kw) operated successfully in the test oil tank. Orig. art. has: 5 figures.

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 003

Card 1/1 W/S

UDC: 621.313.236.1

PLYUSHCH, B.M., doktor tekhn. nauk, prof.; ABDULKAKHMANOV, K.A., inzh.

Parameters of a three-phase induction motor with nonsymmetry  
and nonsinusoidal characteristics of the line voltage. Izv.  
vys. ucheb. zav.; energ. 9 no.1:31-36 Ja '66. (MIRA 19:1)

1. Azerbaydzhanskiy institut nefti i khimii imeni M. Azizbekova.  
Predstavlena kafedroy elektroprivoda i avtomatizatsii promyshlen-  
nykh ustyanovok. Submitted July 17, 1964.

PLYUSHCHI, B.M., doktor tekhn.nauk. prof.; RYSKIN, L.I., inzh.

Performance of the slide contacts of d.c. motors in a liquid dielectric media. Elektrctekhnika 36 no.10:14-16 O '65.

(MIRA 18:10)

ALIYEV, I.A.; NANAZIASHVILI, B.S.; PLYUSHCH, B.M.; SARKISYAN, V.O.

Automated electric drive of a sidewall core lifter. Izv.  
vys. ucheb. zav.; neft' i gaz 6 no.8:87-90 '63.

1. Azerbaydzhanский институт нефти и химии имени Азизбекова. (MIRA 17:6)

PLYUSHCH, B.M.; MELIK-YEGANOV, N.B.; KULIYEV, Sh.A.

Investigating the recuperative-dynamic braking of the automated asynchronous drive of a drilling rig. Izv. vys. zav.; neft i gaz  
7 no. 635-90 '64.  
(MIRA 17:9)

I. Azerbaydzhanskiy institut nefti i khimii imeni Azizbekova.

ESIBYAN, M.A., kand.tekhn.nauk, dotsent; PLYUSHCH, B.M., kand.tekhn.nauk,  
dotsent.

Principal methodological rules for technical and economic calculations  
in power engineering. Izv. vys. ucheb. zav.; energ. 6 no.2:104-106  
F '63. (MIRA 16:3)

1. Azerbaydzhanskiy ordena Trudovogo Krasnogo Znameni institut  
nefti i khimii imeni M.Azizbekova. Predstavlena kafedroy  
elektroprivoda, elektricheskikh mashin i elektrooborudovaniya  
promyshlennykh predpriyatiy.

(Power engineering)

PETROSYAN, Aleksey Nersesovich; PLYUSHCH, B.M., nauchnyy red.;  
BRUSKIN, D.M., ved. red.; BARANOVA, L.G., tekhn. red.

[Automatic control and relay protection of electrical system  
in oil fields] Avtomatika i releiinaia zashchita elektroustanovok  
neftianykh promyslov. Leningrad, Gostoptekhizdat, 1962.  
322 p.

(MIRA 16:2)

(Oil fields--Electric equipment)  
(Electric power distribution)

PLYUSHCH, B.M., kand.tekhn.nauk, dotsent; SARKISYAN, V.O., kand.tekhn.-nauk, dotsent

Simplified formulas for determining the power rating of the electric drives of the pumping jacks of deep-pumping equipment. Izv. vys. ucheb. zav.; energ. 5 no.2:42-49 F '62.

(MIRA 15:3)

1. Azerbayzhanskiy ordena Trudovogo Krasnogo Znameni institut nefti i khimii imeni M.Azizbekova. Predstavlena kafedroy elektroprivoda, elektricheskikh mashin i elektrooborudovaniya prompredpriyatiy.

(Pumping machinery, Electric)

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001341330003-3

PLYUSHCH, B.M., kand.tekhn.nauk; ALIYEV, I.A., kand.tekhn.nauk;  
NANAZIASHVILI, B.S., inzh.

Compounding of synchronous drives with field exciting machinery.  
Vest. elektroprom. 32 no.11:26-29 N '61. (MIRA 14:11)  
(Electric motors, Synchronous)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001341330003-3"

PLYUSHCH, Boris Maksimovich; ROYTMAN, Mariya Vladimirovna;  
SARKISIAN, Vachagan Ovanesovich; ESIBYAN, Migran  
Aleksandrovich; Prinimali uchastiye: KLIMOVA, N.V.;  
EL'BIRT, M.D.; PARFENOV, A.N., dots., retsenzent;  
TARASOV, D.A., prof., retsenzent; AGADZHANOV, S.P.,  
inzh., retsenzent

[Electrical equipment for oil and gas fields] Elektro-  
oborudovanie neftianykh i gazovykh promyslov. Moskva,  
Nedra, 1965. 311 p. (MIRA 18:4)

1. Zaveduyushchiy kafedroy obshchey i spetsial'noy elektro-  
tekhniki Groznenskogo neftyanogo instituta (for Parfenov).
2. Vsesoyuznyy zaochnyy politekhnicheskiy institut (for  
Tarasov). 3. Neftyanoye upravleniye Soveta narodnogo kho-  
zyaystva SSSR (for Agadzhanov).

NANAZIASHVILI, Boris Semenovich, assistant; PLYUSHCH, Boris Maksimovich,  
dotsent, kand.tekhn.nauk; SARKISYAN, Vachagan Ovanesovich,  
dotsent, kand.tekhn.nauk; KULIKOV, Boris Alekseyevich, prepodavatel'

Pickup with a photoelectric device for propotional-integral  
control. Izv.vys.ucheb.zav.; elektro-mekh. 3 no.1:60.  
(MIRA 13:5)

1. Zaveduyushchiy kafedroy elektroprivoda, elektricheskikh  
mashin i elektrooborudovaniya promyshlennyykh predpriyatiy  
Azerbaydzhanskogo industrial'nogo instituta (for Plyushch).
2. Kafedra elektroprivoda, elektricheskikh mashin i elektrooboru-  
dovaniya promyshlennyykh predpriyatiy Azerbaydzhanskogo industrial'-  
nogo instituta (for Nanaziashvili, Sarkisyan, Kulikov).  
(Automatic control)

PLYUSHCH, B.M., kand.tekhn.nauk, dotsent; ROYTMAN, M.V., kand.tekhn.nauk,  
dotsent

Method of decreasing residual magnetism in circuits with amplidyne  
control. Izv. vys. ucheb. zav.; energ. 3 no.8:43-48 Ag '60.  
(MIRA 13:9)

1. Azerbaydzhanskiy ordena Trudovogo Krasnogo Znameni institut nefti  
i khimii imeni M. Azizbekova. Predstavlena kafedroy elektroprivoda,  
elektricheskikh mashin i elektrooborudovaniya prompredpriyatiy.  
(Magnetism) (Rotating amplifiers)

NANAZIASHVILI, B.S., inzh.; PLYUSHCH, B.M., dotsent, kand. tekhn. nauk;  
SARKISYAN, V.O., dotsent, kand. tekhn. nauk; KULIKOV, B.A., inzh.

Servo system with a photoelectric converter. Izv. vys. ucheb. zav.;  
energ. 2 no.10:34-39 0 '59. (MIRA 13:3)

1. Azerbaydzhanskiy ordena Trudovogo Krasnogo Znameni institut  
nefti i khimi imeni M. Azizbekova. Predstavlena kafedroy elektro-  
privoda, elektricheskikh mashin i elektrooborudovaniya prompredpriyatiy.  
(Servomechanisms)

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B744/60/000/01/017/019  
E073/E135

AUTHORS: Nanziashvili, B.S., Assistant; Plyushch, B.M.,  
Candidate of Technical Sciences, Docent; Sarkisyan, V.O.,  
Candidate of Technical Sciences, Docent; and  
Kulikov, B.A., Lecturer

TITLE: Sensor with Photoelectric Equipment for Isodrome  
Regulation

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,  
Elektromekhanika, 1960, Nr 1, pp 139-142 (USSR)

ABSTRACT: Introduction of an isodrome into a system of astatic  
regulation gives the system stability and reduces the  
duration of the transient processes. (Note: an  
isodrome regulator is defined elsewhere as a variant of  
an indirect automatic control with a feedback which  
maintains a given regime with a very low degree of  
residual nonuniformity or entirely without such a  
nonuniformity.) At the Chair for Electric Drives,  
Azerbaijani Institute of Oil and Chemistry imeni  
Azizbekov (Kafedra elektroprivoda, Azerbaijanskiy  
institut nefti i khimii imeni Azizbekova) a photoelectric

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E073/E135

Sensor with Photoelectric Equipment for Isodrome Regulation

integrator was developed which permits obtaining in a simple manner isodrome regulation and to vary as desired the intensity of the regulating effect in proportion to an unbalance signal. In this arrangement there is no flexible feedback and the system remains a single circuit one. The photoelectric integrator has a directional effect (see Fig 1a); it integrates the unbalance signal, which is fed in in the form of a light flux, much more accurately and over a longer period than RC circuits; it does not require amplification of the output voltage, and permits obtaining isodrome regulation in a very simple manner. The principle of this photoelectric integrator was utilised for building a photo-pressure sensor consisting of a hydrostatic lamp (Fig 2); the amount of light hitting each of two photocells depends on the mercury level in the branches of the U-shaped glass tube. This photoelectric pressure sensor unifies the differential metering devices and a proportional transducer, which, in the case of low input signals, has a limited output signal which is then

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**Sensor with Photoelectric Equipment for Isodrome Regulation**  
accurately summed. Fig 1b shows the circuit of a transducer of a.c. current into light signals of variable brightness; although the dependence of the light flux on the magnitude of the input voltage is not linear this transducer can be used in servosystems which contain external feedback. The here described integrator can be used in automatic control systems as well as in simulation systems with comparatively long time constants.  
There are 2 figures, 1 table and 2 Soviet references.

**ASSOCIATION:** Kafedra elektroprivoda, elektricheskikh mashin i elektrooborudovaniya promyshlennyykh predpriyatiy, Azerbaydzhanskiy industrial'nyy institut  
(Chair for Electric Drives, Electrical Machinery and Electrical Equipment of Industrial Undertakings,  
Azerbaijan Industrial Institute)

**DATE RECEIVED:** May 9, 1959

PLYUSHCH, I.F., inzh.

Mechanization and automation of fuel handling in electric power plants.  
Mekh. i avtom. proizv. 14 no.11;59-60 N '60. (MIRA 13:11)  
(Electric power plants--Equipment and supplies)  
(Automatic control)

PLYUSHCH, I.F., inzh.

Mechanized unloading of frozen freight. Makh. i avtom. prcizv.  
17 no.8:20-25 Ag '63. (MIRA 16:10)

PLYUSHCH, I.F., imzh.

Preventing the freezing of piled coal. Mekh.i avtom.prc 16  
no.5;8-9 '62.

(Coal--Storage)

(MIRA 16:5)

PLYUSHCH, I.F.

Methods for preventing the clogging and adherence of wet coal  
in the conveying system of a thermal electric power plant.  
Gos. i elektrotekh.prom. no.4:60-62 O-D '62. (MIRA 16:2)

Gosudarstvennyy trest po organizatsii i ratsionalizatsii  
rayonnukh elektrostantsiy i setey.  
(Electric power plants)

PLYUSHCH, I.F., inzh.

Operation of thawing devices at electric power stations.  
Elek.sta. 31 no.4:79-81 Ap '60. (MIRA 13:7)  
(Electric power plants—Equipment and supplies)  
(Coal handling)

28(1)

SOV/118-59-3-3/22

AUTHOR: Plyushch, I.F., Engineer

TITLE: The Mechanization of Coal Unloading in Fuel Transportation Departments of Chemical Coking Factories (Mekhanizatsiya razgruzki uglya v toplivno - transportnykh tsekhakh koksokhimicheskikh zavodov)

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, 1959, Nr 3, pp 8-10 (USSR)

ABSTRACT: The author gives a detailed description of a rotary tip-car, and thoroughly discusses its favorable and unfavorable aspects. The speed of work depends on the time in which the car is unloaded, as well as on the work of the conveyer belts. The unloading of the wagon was formerly carried out by hand, but now the Mariupol' plant has tested an electric vibrator which gave satisfactory results. Great difficulties arise from the rough climatic conditions in the east, where in winter the washed coal congeals. Heated garages were of no great help, and better results were achieved by insula-

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SOV/118-59-3-3/22

The Mechanization of Coal Unloading in Fuel Transportation Departments  
of Chemical Coking Factories

ting the car with wood shavings. The author draws the following conclusion: For an increase in production, conveyer belts of 1500-1800 t/h are preferred, the unloading of the wagons should be mechanized and steps should be taken against the congealing of coal. Drying of coal, as carried out in the Nizhniy Tagil Plant, is also recommended. There are 3 graphs and 1 table.

Card 2/2

KUDRYSHOV, B.A.; ANDREYENKO, G.V.; SYTINA, N.P.; IVANOVA, Ye.A.; PLYUSHCH, L.I.

Effect of vitamin B<sub>12</sub> on the function of the physiological anti-coagulation system of the body. Vop.med.khim. 10 no.3:269-273  
My-Je '64. (MIRA 18:2)

1. Laborator'ya fiziologii i biokhimii svertvaniya krovi biologopochnennogo fakul'teta Moskovskogo gosudarstvennogo universiteta.

M-7 8

28(1)

SOV/118-59-9-7/20

AUTHOR: Plyushch I.F., Engineer

TITLE: Wheeled Drag-Scrapers in Coal Yards

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, 1959,  
Nr. 9, pp 27-31 (USSR)

ABSTRACT: In connection with the building of numerous power-houses using coal, the question of coal yard equipment mechanization came to the forefront. Up to the present, an overhead travelling crane for loading and unloading of coal was considered the best type of equipment. However, its initial costs and operating expenses make it one of the most expensive kinds of equipment. Taking this fact into consideration, the former Ministry of Electric Power-Houses has decided to equip the coal yards with wheeled drag-scrapers. The first power house in the USSR that began to use them was the Angrenskaya GRES; here, the scraper D-147 with a 6 m<sup>3</sup> scoop capacity (Fig. 3) coupled to a tractor S-80 was introduced. Fig. 1 gives a general layout of the fuel supply at the Angrenskaya GRES. From the unloading bunkers, coal is delivered by

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SOV/118-59-9-7/20

Wheeled Drag-Scrapers in Coal Yards

approached to the coal dump. The further transportation is carried out either by bulldozers (about 10 m<sup>3</sup>/hr.) or by the scraper D-147, in case the haul line to be taken from remote corners of the dump, 100-200 m away from the power house. At the present, the coal yard has 3 bulldozers and one scraper in operation; they reciprocally help each other. For instance, the scraper requires more or less even roads, the maximum up-grade rise for a loaded scraper should not be over 12°. Otherwise it is the bulldozer's task to prepare the road. Tables 2 and 3 give pertinent figures showing the economy attained by using scrapers, as against the application of cranes and other transport equipment. There are 3 tables and 3 diagrams.

Card 2/2

KUSHNER, Kh.F.; FEYGINSON, N.I.; PLYUSHCH, L.N.

Theory of viability in Michurin's biology. Zhur. ob. biol. 14 no. 3:198-214  
My-Je '53.

(MLRA 6:6)  
(Life (Biology))

PLYUSHCH, L.N., nauchnyy sotrudnik.

Violation of facts. Nauka i zhizn' 20 no.12:39-41 D '53.  
(MLRA 6:12)

1. Institut filosofii Akademii nauk SSSR.  
(Biology--Philosophy)

KAGANOV, V.M.; FURMAN, A.Ye.; IGNATOV, A.I.; PLYUSHCH, L.N.; SHOROKHOVA,  
Ye.V.; YUROVAYA, I.L.; PLATONOV, G.V., red.; SUKHOV, A.D.,  
red.izd-vs; RYLINA, Yu.V., tekhn.red.; LAUT, V.G., tekhn.red.

[The problem of causality in modern biology] Problema prichin-  
nosti v sovremennoi biologii. Moskva, 1961. 191 p.  
(MIRA 14:2)

1. Akademiya nauk SSSR. Institut filosofii.  
(CAUSATION) (BIOLOGY-PHILOSOPHY)

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001341330003-3

PLYUSHCH, L.N., kand.filosofskikh nauk

Obrazovaniye i Moshchnye sredstva antropii. Nauka i zhizn' 28 no. 1-2  
1981. 128 s. (1000+111) (1000+111)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001341330003-3"

PLYUSHCH, L.S.

In the Technical-Economic Committee of the Rostov Province Economic Council. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i  
tekh.inform. no.5:86-89 '62. (MIRA 15:7)  
(Rostov Province—Economic councils)

PLYUSHCH, L.S.

In the technical and economic council of the North Caucasus Economic Council. Biul. tekhn.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekhn. inform. 17 no.2:77-78 '64.

(MIRA 17:6)

PLYUSHCH, L.S.

Activity of the committees of the Technical and Economic section  
of the Rostov Economic Council. Biul.tekh.-ekon.inform.Gos.  
nauch.-issl.inst.nauch.i tekh.inform. no.2:81-82 '63'

(MIRA 16:2)

(Rostov Province—Economic councils)

PLYUBICH, I.B., otvetstvennyy na vypusk

[Traffic regulations of the city of Rostov-on-Don] Pravila upravleniya  
dorozhnym promezhutokom Rostova-na-Donu. Rostov-na-Donu, Izdat. "Molot,"  
1954, No. 9 (Mirovskiy) (MIRA 9-6)

I. Mantov on the Don, Gorodskoy sovet deputatov Trudyashchikhsya  
(Rostov-on-Don--Traffic regulations)

GORB, T.V., professor; PLYUSHCH, M.G., dotsent; SARZHINSKIY, N.V., kandidat  
veterinarnykh nauk.

Effect of various corn rations on the bacon and lard production of  
swine. Veterinaria 32 no.10:74-76 O '55. (MIRA 8:12)

I.Khar'kovskiy veterinarnyy institut.  
(CORN (MAIZE) (SWINE--FEEDING AND FEEDING STUFFS))

1. PLYUSHCH, M.G., ROS', I.P., GORB., T.V.
2. USSR (6CC)
4. Swine
7. Influence of vitamins A, D, and C on the growth and state of health of sucking pigs.  
Sov. zootekh. y<sup>7</sup> no. 12, 1 52
9. Monthly List of Russian Accessions, Library of Congress, February 1953, Uncl.

1. GORB, T. V., Prof.: PLYUSHCH, M. G.: ROS', I. F.
  2. USSR (600)
  4. Vitamins
  7. Influence of vitamins A, D, and C on the growth and state of health of sucking pigs. Sov. zootekh. 7 no. 12, 1952.
9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

PLYUSHCH, O. F.

PLYUSHCH, O. F. — "The Use of Polychlorovinyl Pitch in Monumental-  
Decorative Work." Academy of Architecture Ukrainian SSR. Inst of Monumental  
Portraiture and Sculpture. Kiev, 1955. (Dissertation for the Degree of  
Candidate in Technical Sciences)

SOURCE Knizhnaya Letopis' No 6 1956

DALETSKIY, G.S.; KNIGIN, P.I.; LANDSMAN, A.P.; PLYUSHCH, O.P.; SHAVRIN, N.V.;  
YAGUDAYEV, M.D.

Studying the effect of concentrated solar energy on the service  
characteristics of solar (silicon) photobatteries. Izv.AN Uz.  
SSR.Ser.fiz.-mat.nauk 6 no.1:49-52 '62. (MIRA 15:4)

1. Fiziko-tehnicheskiy institut AN UzSSR i Vsesoyuznyy nauchno-  
issledovatel'skiy institut istochnikov toka.  
(Solar batteries)

35604  
S/166/62/000/001/006/0C9  
B125/B104

26.1512

AUTHORS: Daletskiy, G. S., Knigin, P. I., Landsman, A. P., Plyushch,  
O. P., Shavrin, N. V., Yagudayev, M. D.

TITLE: Effect of solar energy concentration upon the operational  
properties of (silicon) solar photopiles

PERIODICAL: Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-  
matematicheskikh nauk, no. 1, 1962, 49-52

TEXT: A joint investigation with the VNIIIT was conducted by the authors  
in Tashkent from April to June, 1961 on the output power of silicon  
photoconverters of luminous flux. The aim is to collect data for the  
construction of a solar power station. The Sun's light was concentrated  
through an ordinary parabolic cylindrical mirror onto the 288-cm<sup>2</sup> water-  
cooled silicon photopile constructed at the above Institute. The angle of  
incidence of the Sun's rays was of no practical significance for the present  
purpose. The maximum yield function of the piles rose, although somewhat  
more slowly, even at photocurrents of 6600-7700 watts/m<sup>2</sup>, at surface  
temperatures from 10°C to 70°C and air temperatures from 8 to 15°C (i.e.,

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S/166/62/000/001/006/009  
B125/B104

Effect of solar energy ...

under practical operational conditions). This also holds in the case of considerable temperature differences between the pile and the surrounding medium. It probably takes higher luminous fluxes for saturation to be brought about. The maximum output power was 4-4.2 watts. At an increase of the luminous flux from 0 to 7000 kcal/m-hour, the pile emf rose by only 5-6%. Since pile heating by luminous flux produces a linear power reduction, it is necessary to develop efficient cooling systems. The reciprocal exchange of photoconverters in the pile would also serve to check this power drop. Since the temperature difference between pile and air can attain rather high values in the extremely hot summers of Soviet Central Asia, the power drop can be considerable. The yield function of solar power stations could be augmented to the eight to tenfold by improving the cooling system, by providing uniform illumination all over the pile surface, and by ensuring optimum commutation conditions. There are 6 figures and 1 Soviet reference.

ASSOCIATION: Fiziko-tehnicheskiy institut AN UzSSR (Physicotechnical Institute of the AS Uzbekskaya SSR). Vsesoyuznyy n.-i. institut istochnikov toka (All-Union Scientific Research Institute of Current Sources)

SUBMITTED: August 4, 1961  
Card 2/2

PLYUSHCH, P.I.

DAIRY CATTLE

My success in milking cows. Sots.zhiv. 14 no. 9, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952, Unclassified.

FLYUS'CH, Z. M.

Kashkay, M. A. and Flyushch, Z. M. "The Ninkendsk and Akhmedlinsk carbonate mineral springs," Izvestiya Akad. nauk Azerbaydzh. SSR, 1948, No. 9, p. 63-88 - resume in Azerbaijani language  
SC: U-365, 16 June 53, (Iztopis 'Zhurnal 'nykh Statey, No. 5, 1949).

L 1343-66 EWT(a)/EWT(l)/EED-2 GW/JT/BC

ACCESSION NR: AP5020912

UR/0006/65/000/008/0015/0021

528.517

H/7  
44  
BAUTHOR: Borodulin, G. I.; Sinitsyn, V. A.; Popov, I. A.; Mal'tsev, B. N.;  
Plyushchev, A. N. 44,55 44,55 44,55 44,55

TITLE: Results of tests of a prototype of the TD-1 optical range finder

SOURCE: Geodeziya i kartografiya, no. 8, 1965, 15-21

TOPIC TAGS: geodetic instrument, range finder, geodimeter, TD 1 range finder,  
mining survey 44,55, 12

ABSTRACT: Two prototypes of the TD-1 small optical range finder, originally developed in 1960 by the Vsesoyuznyy nauchno-issledovatel'skiy institut gornoj geomekhaniki i marksheyderskogo dela (All-Union Scientific Research Institute of Mining Geomechanics and Mine Surveying), to measure distances in the 150—5000-m range with a mean square error  $\pm 1.5$  cm, were produced in 1963 and field tested in 1964 by the Electronics Instruments Laboratory of the Institute. Simultaneous testing was carried out with a Swedish NASM-4B geodimeter. Comparative measurements were made against those of the Institute's field comparator, highly precise traverse, second- and third-order triangulation, and invar wires. Subsequent field tests

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were made by an interdepartmental commission set up by the USSR Administration of Measuring Instruments of the State Committee of Standard Measures and Measuring Instruments. Results of these tests showed these instruments to be highly precise.

The mean square error of a single measurement for the first prototype was  $\pm 9$  mm and for the second  $\pm 16$  mm; the systematic error was  $+1$  mm and  $+8$  mm, respectively; and the mean value of the deviation of the number of waves computed from the total number of waves was  $\pm 0.02$  for both prototypes. Orig. art. has: 2 figures and 5 tables.

[ER]

ASSOCIATION: none

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